

**REMOVAL ASSESSMENT
QUALITY ASSURANCE SAMPLING PLAN**

FOR

**CES ENVIRONMENTAL SERVICES
4904 GRIGGS ROAD
HOUSTON, HARRIS COUNTY, TEXAS**

Prepared for

U.S. Environmental Protection Agency Region 6
Will LaBombard, Project Officer
1445 Ross Avenue
Dallas, Texas 75202

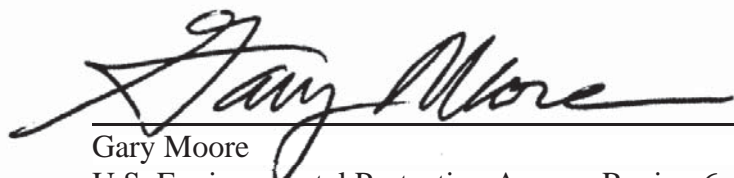
Contract No. EP-W-06-042
Technical Direction Document No. 5/WESTON-042-14-011
WESTON Work Order No. 20406.012.005.0897.01
NRC No. N/A
CERCLIS No. TXD008950461
FPN N/A
EPA OSC: Gary Moore
START-3 PTL: Derrick Cobb

Prepared by

Weston Solutions, Inc.
Cecilia H. Shappee, P.E., Program Manager
5599 San Felipe, Suite 700
Houston, Texas 77056
(713) 985-6600

November 2014

SIGNATURE PAGE



Gary Moore
U.S. Environmental Protection Agency Region 6
On-scene Coordinator

07/02/15

Date

Derrick Cobb
Weston Solutions, Inc.
START-3 Project Team Leader

Date

Cecilia Shappee, P.E.
Weston Solutions, Inc.
START-3 Quality Assurance Officer

Date

Jeff Criner
Weston Solutions, Inc.
START-3 Site Assessment/ Inspection Manager

Date

TABLE OF CONTENTS

Section	Page
1. INTRODUCTION	1-1
1.1 PROJECT OBJECTIVES	1-1
1.2 PROJECT TEAM	1-1
2. SITE LOCATION AND BACKGROUND	2-1
2.1 SITE DESCRIPTION	2-1
2.2. SITE HISTORY	2-1
3. SAMPLING APPROACH AND PROCEDURES.....	3-1
3.1 OVERVIEW OF SAMPLING ACTIVITIES.....	3-1
3.1.1 Field Activities Review Meeting	3-1
3.1.2 Health and Safety Implementation.....	3-1
3.1.3 Mobilization and Command Post Establishment	3-2
3.2 SAMPLING/MONITORING APPROACH.....	3-2
3.2.1 Waste Sampling	3-2
3.2.2 Surface Water Sampling	3-2
3.2.3 Investigation-Derived Wastes.....	3-2
3.2.4 Sample Handling Procedures	3-3
3.2.5 Quality Assurance/Quality Control Samples	3-3
3.3 SAMPLE MANAGEMENT	3-3
3.4 DECONTAMINATION	3-4
3.5 SAMPLE PRESERVATION, CONTAINERS, AND HOLD TIMES	3-4
4. ANALYTICAL METHODS.....	4-1
5. DATA VALIDATION.....	5-1
6. QUALITY ASSURANCE.....	6-1
6.1 SAMPLE CUSTODY PROCEDURES	6-1
6.2 PROJECT DOCUMENTATION.....	6-2
6.2.1 Field Documentation.....	6-3
6.2.2 Response Manager	6-5
6.2.3 Report Preparation	6-6

LIST OF APPENDICES

Appendix A	EPA Region 6 - Regional Screening Levels
Appendix B	Site-Specific Data Quality Objectives
Appendix C	Standard Operating Procedures
Appendix D	TDD No. 5/WESTON-042-14-011

LIST OF FIGURES

Figure 1-1	Site Location Map
Figure 2-1	Site Area Map
Figure 3-1	Site Layout Map

LIST OF TABLES

Table	Page
Table 3-1 Sample Requirements	3-5

1 INTRODUCTION

Weston Solutions, Inc. (WESTON®), the Superfund Technical Assessment and Response Team (START-3) Contractor, has been tasked by the U.S. Environmental Protection Agency (EPA) Region 6 under Contract Number EP-W-06-042, Technical Direction Document (TDD) No. 5/WESTON-042-14-011 (Appendix D) to conduct a removal assessment at the CES Environmental Services (CES) Site located at 4904 Griggs Road, Houston, Harris County, Texas. Site coordinates are Latitude 29.69963 and Longitude -95.34293.

A Site Location Map is provided as Figure 1-1. All figures are provided as separate portable document format (PDF) files. START-3 has prepared this Quality Assurance Sampling Plan (QASP) to describe the technical scope of work to be completed as part of the TDD. The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database number assigned to the CES Site is TXD008950461.

1.1 PROJECT OBJECTIVES

EPA and START-3 (EPA team) are providing technical assistance to EPA Region 6 during the removal assessment at the CES Site (Site). The objective of the assessment is to evaluate the hazardous materials and waste located on the Site and to determine if the materials and waste are a threat to public health, welfare, and the environment as defined under 40 Code of Federal Regulations (CFR) 300.415(b)(2).

As part of the removal assessment, the EPA team will conduct waste sampling to determine disposal requirements and surface water sampling.

1.2 PROJECT TEAM

The project team will consist of the following individuals and their roles:

- Gary Moore as the EPA On-scene Coordinator (OSC);
- Jeff Criner as the START-3 Site Assessment/Inspection Manager;
- Derrick Cobb as the Project Team Leader (PTL)/Field Safety Officer (FSO);
- Tom Walzer as the Data Manager (DM); and

- Additional Field Team Members to assist with assessment activities and sample preparation.

The PTL will be responsible for coordinating schedules with the EPA OSC and Project Team. The PTL will be responsible for the technical quality of work performed in the field and will serve as the EPA team liaison to EPA Region 6 personnel during the site activities. The PTL, with the concurrence of the EPA OSC, will determine the location of any sample collection; collect samples as necessary; document the site activities in the field logbook; and verify the sample documentation. The Data Manager (DM) will be responsible for entering all samples collected into SCRIBE; producing accurate chain-of-custody documentation for the samples; and entering daily operations and sample collection data into the Regional Response Center – Enterprise Data Management System (RRC-EDMS) Response Manager software. The PTL will oversee the packaging and shipping of samples to the designated laboratory. The PTL will also be responsible for implementing the site-specific health and safety program.

2 SITE LOCATION AND BACKGROUND

The Site is located southeast of downtown Houston, in an area known as the “Third Ward.” The physical address is 4904 Griggs Road in Houston, Harris County, Texas. The geographic center of the Site is located at Latitude 29.69963 and Longitude -95.34293. A Site Area Map is provided as Figure 2-1.

2.1 SITE DESCRIPTION

The facility is located in a mixed use, residential and commercial, neighborhood of south central Houston. The Site contains a fence around the property boundary. A Site Layout Map is provided as Figure 3-1.

The facility is currently abandoned. Historically, the facility operated as a waste treatment and disposal facility with numerous aboveground storage tanks (AST), frac tanks, vacuum boxes, totes, drums, and other miscellaneous containers present on the property. There was also a tank washing area and waste bulking and treatment portion of the facility.

2.2 SITE HISTORY

In 2002, CES began operating the Site as a waste treatment and disposal facility providing services such as transportation, waste packaging, disposal, and tank cleaning. After an investigation, conducted by the FBI, EPA, and Houston Police Department (HPD), into questionable business practices in 2009, CES filed for bankruptcy in 2010. The property is currently managed by a Trustee appointed by the U.S. Bankruptcy Court. Numerous ASTs, frac tanks, vacuum boxes, totes, drums, and other miscellaneous containers, as well as areas for tank washing and bulk waste storage, are present on the Site. In March and July of 2014, it was reported that vandalism had occurred on-site resulting in spillage of chemicals and wastes onto the ground.

On 01 August 2014, the National Response Center (NRC) was notified by HPD of a discharge of an unknown oily substance from the now-closed CES facility into neighboring stormwater drainage ditches. On 02 August 2014, EPA Region 6 Prevention and Response Branch (EPA-PRB) was notified via NRC Report Nos. 1091011 and 1091021, and EPA-PRB activated WESTON, the EPA Region 6 START-3 contractor under Contract No. EP-W-06-042, TDD No. 5/WESTON-

042-14-011. START-3, as part of the EPA team, was tasked to repair the perimeter fencing and secure the site, inventory the containers, sample the waste from Bullet Tanks 407 and 408, sample off-site stormwater runoff and soil, and conduct on- and off-site air monitoring. The unknown oily substance was discharged into drainage ditches following heavy rains. The spill path flowed out of the southwest corner of the Site, west on Kingsbury Street ending at Calhoun Street, and south on Wayland Street ending at Perry Street. The source of the spill was likely bullet tank 408 located in the central area of the Site.

During the August 2014 response, the EPA team collected one surface water sample, nine soil samples, and four air samples. The surface water sample was collected from a ditch along Wayland Street between the intersections with Keystone Street and Dewberry Street. The surface water sample was analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), pesticides, herbicides, polychlorinated biphenyls (PCBs), target analyte list (TAL) metals, and mercury (Hg). The surface water sample contained concentrations of aluminum, cadmium, iron, lead, magnesium, manganese, nickel, and selenium above the site-specific screening levels.

The nine soil samples were collected in the northern and southern ditches along Kingsbury Street. The soil samples were analyzed for VOCs, SVOCs, PCBs, TAL metals, and total petroleum hydrocarbons (TPH). The detections in all of the soil samples were reported at concentrations below the site-specific screening levels. TPH was detected in one soil sample (CES-CS-01-51) that was collected from the runoff pathway between the CES site and Kingsbury Street. The total TPH concentration in CES-CS-01-51 was reported at 381 milligrams per kilogram (mg/kg). Two of the air samples were collected near the location of the soil samples, and the other two air samples were collected north and south of Tanks 407 and 408. TPH was detected in the two air samples collected on-site at concentrations of 98 micrograms per cubic meter (ug/m³) and 410 ug/m³ in samples CES-CS-SUMMA-03 and CES-CS-SUMMA-04, respectively.

3 SAMPLING APPROACH AND PROCEDURES

The specific field investigation activities that will be conducted during the CES removal assessment are presented in the following subsections. Specifically, sampling procedures, locations, quality assurance (QA), and the analytical approach that will be used during the removal assessment are discussed below. Relevant Standard Operating Procedures (SOPs) for field sampling methods are included as Appendix C.

3.1 OVERVIEW OF SAMPLING ACTIVITIES

The EPA team developed a sampling strategy intended to collect data necessary to evaluate and meet the objective of this removal assessment. Data quality objectives (DQOs) as well as an overview of the health and safety and field activities required to complete these tasks are presented in the following subsections.

The action levels will be determined based on comparison to the hazardous waste screening levels (Appendix A).

3.1.1 Field Activities Review Meeting

Prior to beginning daily field activities, the EPA Team PTL will conduct a meeting with the entire field team to familiarize them with the project scope of work; discuss the planned daily field activities, roles, and responsibilities; and review the project Health and Safety Plan (HASP) and other relevant operating procedures. The field team will also be briefed on the project budget and expense reporting responsibilities.

3.1.2 Health and Safety Implementation

The removal assessment field activities will be conducted in accordance with a site-specific Health and Safety Plan (HASP). The HASP specifies that on-site sampling activities will proceed in Level B (saranex, full-face respirator, supplied air, disposable gloves, and steel-toed boots). After evaluation of the breathing air, personal protection could be down-graded to Level C (saranex, full-face respirator, cartridge, disposable gloves, and steel-toed boots). The PTL will act as the Field Safety Officer (FSO) and will be responsible for implementation of the HASP during all field investigation activities. The EPA team will be required to conduct work according to the

guidelines and requirements of the HASP. In accordance with WESTON general health and safety operating procedures, the field team will also drive the route to the hospital specified in the HASP prior to initiating sampling activities.

3.1.3 Mobilization and Command Post Establishment

The EPA team will mobilize the equipment required for the removal assessment and sampling events from the EPA warehouse located in Addison, Texas and from WESTON's Regional Equipment Store (RES) warehouse in Houston, Texas, as necessary. When possible, the EPA team will use government-furnished property.

3.2 SAMPLING/MONITORING APPROACH

Waste sampling will be conducted in general accordance with the WESTON Standard Operating Procedures (SOPs) included in Appendix C. The specific sampling, decontamination, and sample handling procedures, including disposition of investigation-derived waste (IDW), is described in the following subsections.

3.2.1 Waste Sampling

The EPA team will collect waste samples from all ASTs, frac tanks, vacuum boxes, drums, totes, and other miscellaneous containers on-site. The exact number of samples and locations will be determined in the field by the EPA OSC and the EPA team. The samples will be collected to ensure that a representative aliquot is obtained throughout the entire column of waste and analyzed for treatment and disposal profiling.

3.2.2 Surface Water Sampling

The EPA team will collect surface water samples from areas of ponded stormwater on-site. The samples will be collected to ensure that any stormwater flowing off-site is not contaminated.

3.2.3 Investigation-Derived Wastes

Any disposable sampling equipment will be bagged and stored on-site for disposal. It is anticipated that minimal amounts of IDW will be generated during this activity.

3.2.4 Sample Handling Procedures

Samples will be collected using equipment and procedures appropriate to the matrix, parameters, and sampling objectives. The volume of the sample collected must be sufficient to perform the analysis requested. Samples must be stored in the proper types of containers and preserved in a manner for the analysis to be performed (SOPs 1001.01 and 1001.10).

All unused, uncontaminated sampling equipment and sample containers will be maintained in a clean, segregated area. Samples will be collected with clean uncontaminated equipment (SOP 1201.01). Each sample collected for laboratory analysis will be placed directly into pre-cleaned, unused containers. Sampling personnel will don clean gloves between each sample collection/handling. Samples will be assembled and catalogued prior to shipping (SOPs 1101.01 and 1102.01) to the designated laboratory.

3.2.5 Quality Assurance/Quality Control Samples

The EPA team will collect QA/QC samples according to the following:

- Temperature blanks and trip blanks will be prepared and provided by the laboratory. Both blanks will be packaged along with the field samples in the shipping cooler and will represent the temperature of the incoming cooler upon receipt at the laboratory. Use of these blanks within a shipping container enables the laboratory to assess the temperature of the shipment without disturbing any of the field samples.

3.3 SAMPLE MANAGEMENT

Specific nomenclature that will be used by the EPA team will provide a consistent means of facilitating the sampling and overall data management for the project as defined in WESTON SOPs (Appendix C). Any deviations from the sample nomenclature proposed below must be approved by the START-3 Assessment/Inspection Manager. The general nomenclature consists of the following components:

- Geographic location or on-site sample location or container number.
- Date (of sample activity).

Sample locations will be identified in the field, as each location is sampled, independent of the physical location of the sample.

3.4 DECONTAMINATION

The non-disposable sampling equipment used during the sample collection process will be thoroughly decontaminated before initial use, between use, and at the end of the field investigation.

Equipment decontamination will be completed in the following steps:

1. Nonphosphate detergent and potable water wash to clean the equipment.
2. Final potable water rinse.
3. Equipment air-dried.

Decontamination activities will be conducted at a temporary decontamination pad that will be constructed in an area identified prior to the beginning of field activities (SOP 1201.01).

3.5 SAMPLE PRESERVATION, CONTAINERS, AND HOLD TIMES

Once collected, samples will be stored in coolers and kept at approximately 4°C while at the site and until they are submitted for analyses. The samples will be sent to Accutest Laboratory in Houston, Texas.

Samples that have been analyzed will be disposed of by the laboratory in accordance with the laboratory SOPs.

Table 3-1
Sample Requirements

Name	Analytical Methods	Matrix	Container	Preservation	Minimum Volume or Weight	Maximum Holding Time
VOCs/TPH	TO-15	Air	SUMMA Canister	NA	6 liters	14 days from collection
TCL VOCs	SW846 8260B	Water / Solid	Glass, (Teflon-lined septum for water)	4°C, HCl to pH<2 (pH adjust for water only)	3 x 40 mL vials (water), 8 oz (solid)	14 days (7 days if unpreserved by acid for water)
TCL SVOCs	SW846 8270C	Water / Solid	Amber Glass, (Teflon-lined for water)	4°C	2 x 1 liter (water), 8 oz (solid)	7 days extract (water), 14 days (solid)/ 40 days analysis
TAL Metals and Mercury	SW846 6010B and SW846 7470/7471A	Water / Solid	Polyethylene (water), Glass (solid)	HNO ₃ to pH<2 (water), 4°C	500 mL, 8oz (solid-combined w/SVOCs)	28 days for mercury 180 days all other metals
Pesticides	SW846 8081B	Water / Solid	Amber Glass, (Teflon-lined for water)	4°C	2 x 1 liter (water), 8 oz (solid)	7 days extract (water), 14 days (solid)/ 40 days analysis
PCBs	SW846 8082A	Water / Solid	Amber Glass, (Teflon-lined for water)	4°C	1 x 1 liter (water), 8 oz (solid-combined w/SVOCs)	7 days extract (water), 14 days (solid)/ 40 days analysis
Herbicides	SW846 8151A	Water / Solid	Amber Glass, (Teflon-lined for water)	4°C	1 x 1 liter (water), 8 oz (solid-combined w/SVOCs)	7 days extract (water), 14 days (solid)/ 40 days analysis

Table 3-1
Sample Requirements
(Continued)

Name	Analytical Methods	Matrix	Container	Preservation	Minimum Volume or Weight	Maximum Holding Time
RCI	SW846 7.3/Ch. 8/1010A/9040C	Waste	Amber Glass, (Teflon-lined for water)	4°C	500 mL, 8oz (solid-combined w/SVOCs)	28 days
BTU	ASTM D240	Waste	Polyethylene (water), Glass (solid)	4°C	50 ml	Not Regulated

4 ANALYTICAL METHODS

Samples collected by the EPA team will be analyzed by the Accutest Laboratory located in Houston, Texas. The following methods of analysis will be conducted on samples submitted, as required.

Soil Samples

- Volatile Organic Compounds (VOCs) (EPA Method 8260B)
- Semi-volatile Organic Compounds (SVOCs) (EPA Method 8270C)
- Pesticides (EPA Method 8081A)
- PCBs (EPA Method 8082A)
- Herbicides (EPA Method 8151A)
- Total Analyte List (TAL) Metals (EPA SW846 Method 6010B)
- Mercury (EPA Method 7470/7471)
- Total Petroleum Hydrocarbons (TPH) (TX1005)

Air Samples

- Volatiles and Total Petroleum Hydrocarbons (EPA Method TO-15)

Waste Samples

Chemical Analyses

- Total TCL VOCs
- TCLP RCRA VOCs
- Total TCL SVOCs
- TCLP RCRA SVOCs
- Total TAL Metals
- TCLP RCRA Metals
- Total PCBs
- Total TCL Pesticides
- TCLP RCRA Pesticides
- Total TCL Herbicides
- TCLP RCRA Herbicides
- Total TPH by TX 1005
- Total Cyanide
- Total Sulfide
- Total Dioxin/Furans
- Total Organic Carbon

- Total Anions (bromide, chloride, fluoride, nitrate, nitrite, phosphate, sulfate)
- Ammonia

Physical Properties

- Viscosity
- Melting Point
- Boiling Point
- Reactivity/Corrosivity/Ignitability (RCI) (EPA SW846 7.3/Ch. 8/1010A/9040C)
- Flash Point
- pH
- Specific Gravity
- British Thermal Units (BTU) (ASTM D240)
- Water Content
- Total Suspended Solids

Data validation from samples sent to the Accutest will be conducted by the EPA. Data validation will be conducted in accordance with the EPA CLP National Function Guidelines for Superfund Organic/Inorganic Methods Data Review (June 2008 and January 2010).

5 DATA VALIDATION

The EPA team will validate the analytical data generated by the laboratories using EPA-approved validation procedures in accordance with the EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2013) and Organic Data Review (October 2013). A summary of the data validation findings will be presented in Data Validation Summary Reports as part of the final report. The EPA team will evaluate the following applicable parameters to verify that the analytical data is within acceptable QA/QC tolerances:

- The completeness of the laboratory reports, verifying that required components of the report are present and that the samples indicated on the accompanying chain-of-custody are addressed in the report.
- The calibration and tuning records for the laboratory instruments used for the sample analyses.
- The results of internal standards analyses.
- The results of laboratory blank analyses.
- The results of laboratory control sample (LCS) analyses.
- The results of surrogate recovery analyses.
- Compound identification and quantification accuracy.

Variances from the QA/QC objectives will be addressed as part of the Data Validation Summary Reports.

6 QUALITY ASSURANCE

Quality assurance will be conducted in accordance with the WESTON Corporate Quality Management Manual, dated September 2012; the WESTON Programmatic Quality Assurance Project Plan (QAPP), dated December 2009; and the WESTON Quality Management Plan, dated July 2009. Following receipt of the TDD from EPA, a Quality Control (QC) officer will be assigned and will monitor work conducted throughout the entire project including reviewing interim report deliverables and field audits. The EPA team PTL will be responsible for QA/QC of the field investigation activities. The designated laboratory utilized during the investigation will be responsible for QA/QC related to the analytical work. The EPA team will also collect samples to verify that laboratory QA/QC is consistent with the required standards and to validate the laboratory data received.

6.1 SAMPLE CUSTODY PROCEDURES

Because of the evidentiary nature of sample collection, the possession of samples must be traceable from the time the samples are collected until they are introduced as evidence in legal proceedings. After sample collection and identification, samples will be maintained under chain-of-custody (COC) procedures. If the sample collected is to be split (laboratory QC), the sample will be allocated into similar sample containers. Sample labels completed with the same information as that on the original sample container will be attached to each of the split samples. Personnel required to package and ship coolers containing potentially hazardous material will be trained accordingly.

The EPA team will prepare and complete COC forms for all samples. The COC procedures are documented and will be made available to all personnel involved with the sampling. A typical COC record will be completed each time a sample or group of samples is prepared for shipment to the laboratory. The record will repeat the information on each sample label and will serve as documentation of handling during shipment. A copy of this record will remain with the shipped samples at all times, and another copy will be retained by the member of the sampling team who originally relinquished the samples. At the completion of the project, the data manager will export the SCRIBE COC documentation to the Analytical Service Tracking System (ANSETS) database.

Samples relinquished to the participating laboratories will be subject to the following procedures for transfer of custody and shipment:

- Samples will be accompanied by the COC record. When transferring possession of samples, the individuals relinquishing and receiving the samples will sign, date, and note the time of the sample transfer on the record. This custody records document transfer of sample custody from the sampler to another person or to the laboratory.
- Samples will be properly packed for shipment and dispatched to the appropriate laboratory for analysis with separate, signed custody records enclosed in each sample box or cooler. Sample shipping containers will be custody-sealed for shipment to the laboratory. The preferred procedure includes use of a custody seal wrapped across filament tape that is wrapped around the package at least twice. The custody seal will then be folded over and stuck to the seal to ensure that the only access to the package is by cutting the filament tape or breaking the seal to unwrap the tape.

SOPs 1101.01 and 1102.01 (Appendix C) describe these procedures in more detail.

6.2 PROJECT DOCUMENTATION

Field observations will be recorded legibly and in ink and by entry into field logbooks, Response Manager, or SCRIBE. Response Manager is the Enterprise Data Collection System designed to provide near real-time access to non-analytical data normally collected in logbooks. Response Manager provides a standard data collection interface for modules of data normally collected by START-3 field personnel while on-site. These modules fall into two basic categories for Response and Removal. The modules include Emergency Response, Reconnaissance, Facility Assessment, Shipping, Containers, Materials, Calls, HHW, and General/Site Specific data. The system provides users with a standard template for laptop/desktop/tablet PCs that will synchronize to the secure web interface using merge replication technology to provide access to field collected data via the RRC-EDMS EPA Web Hub. Response Manager also includes a PDA application that provides some of the standard data entry templates from Response Manager to users for field data entry. Response Manager also includes an integrated GPS unit with the secure PDA application, and the coordinates collected in Response Manager are automatically mapped on the RRC-EDMS interactive mapping site. GIS personnel can then access this data to provide comprehensive site maps for decision-making support.

Response Manager also includes an Analytical Module that is designed to give SCRIBE users the ability to synchronize the SCRIBE field data to the RRC-EDMS Web Hub. This allows analytical

data managers and data validators access to data to perform reviews from anywhere with an Internet connection. The Analytical Module is designed to take the analytical data entered into EPA SCRIBE software and make it available for multiple users to access one site. The EPA team will utilize SCRIBE for data entry on-site and will upload to the Response Manager Analytical module.

6.2.1 Field Documentation

The following field documentation will be maintained as described below.

Field Logbook

The field logbook is a descriptive notebook detailing site activities and observations so that an accurate, factual account of field procedures may be reconstructed. Logbook entries will be signed by the individuals making them. Entries should include, at a minimum, the following:

- Site name and project number.
- Names of personnel on site.
- Dates and times of all entries.
- Description of all site activities, including site entry and exit times.
- Noteworthy events and discussions.
- Daily weather conditions.
- Site observations.
- Identification and description of samples, including locations, sample ID, sample date and time, sample depth, sample preservation, collection type, analyses requested, and chain-of-custody information.
- Subcontractor information and names of on-site personnel.
- Records of photographs in Response Manager.
- Site sketches.
- Calibration results, as necessary.

Sample Labels

Sample labels will be securely affixed to the sample container. The labels will clearly identify the particular sample and include the following information:

- Sample ID

- Site name and project number.
- Date and time the sample was collected.
- Sample preservation method.
- Analysis requested.

Chain-of-Custody Record

A COC will be maintained from the time of sample collection until final deposition. Every transfer of custody will be noted and signed for and a copy of the record will be kept by each individual who has signed it. The COC is discussed in Subsection 6.1 Sample Custody Procedures.

Custody Seal

Custody seals demonstrate that a sample shipment container has not been tampered with or opened. The individual who has custody of the samples will sign and date the seal and affix it to the container in such a manner that it cannot be opened without breaking the seal.

Photographic Documentation

The EPA team will take photographs to document site conditions and activities as site work progresses. Initial conditions should be well documented by photographing features that define the site-related contamination or special working conditions. Representative photographs should be taken of each type of site activity. The photographs should show typical operations and operating conditions as well as special situations and conditions that may arise during site activities. Site final conditions should also be documented as a record of how the site appeared at completion of the work.

Photographs should be taken with either a film camera or digital camera capable of recording the date on the image. Each photograph will be recorded within Response Manager with the location of the photographer, direction the photograph was taken, the subject of the photograph, and its significance (i.e., why the picture was taken). Where appropriate, the photograph location, direction, and subject will also be shown on a site sketch and recorded within Response Manager.

6.2.2 Response Manager

The EPA team will use the Response Manager module located on the EPA Web Hub, <https://solutions.westonproject.net/epawebhub/>, to collect and organize the data collected from project activities. The information to be included encompasses some or all of the following depending on the specific project needs:

- General Module – Site-specific data including location and type of site. It also includes an area for key site locations including geo-spatial data associated with the key site locations.
- Emergency Response Module – includes the following sub-modules: Basic Info, HAZMAT, Release, Time Line Log, Incident Zones, Photos, Sensitive Receptors, Evacuations, Source, Cause, and Weather.
- Reconnaissance Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for targeted reconnaissance efforts. Typically the data in this module is associated with ESF-10 deployments and the cleanup of orphaned containers and hazardous debris, but the module can be utilized for any and all reconnaissance activities.
- Facility Assessment Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for assessments of structures. This is typically utilized for EPA-regulated program facilities during an ESF-10 deployment of resources. This module can be utilized to track the assessment of any facilities including multiple assessments of the fixed facilities.
- Shipping Module – provides standard templates for creating a cradle-to-grave record of waste shipments from the site until they are recycled or destroyed. This includes the ability to capture manifests and manifest line items and to upload photos/original documents to support the records.
- Container Module – provides standard templates for cataloguing containers including HAZCAT and Layer information in each container. The module also allows for the tracking of which containers are bulked.
- Properties Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for collection of property data including access agreements and assessments of the property and current status of property regarding the site removal action.
- Materials Module – provides standard templates for tracking materials that are brought on-site or that are removed from the site.

- Daily Reports – provides standard templates for tracking daily site activities, daily site personnel, and daily site notes for reporting back to the EPA OSC in a POLREP or SITREP.
- HHW Module – provides standard templates with the flexibility of adding any additional questions or values to the drop-down lists for tracking the amount of HHW collected at individual collection stations by HHW type.
- Data Files – data files can be uploaded in the photo-module section and be associated with individual records or with the site in general. The meta data associated with that data file can be filled in using the photolog fields.

The data stored in the Response Manager database can be viewed and edited by any individual with access rights to those functions. At any time deemed necessary, Pollution Reports (POLREPs) and/or Situation Reports (SITREPs) can be generated by exporting the data out of Response Manager into Microsoft Excel/Word. The database is stored on a secure server and backed up regularly.

6.2.3 Report Preparation

At the completion of the project, the EPA team will review and evaluate the laboratory data and prepare a draft report of field activities, figures, and analytical results for EPA OSC review. Draft deliverable documents will be uploaded to the EPA TeamLink website for EPA OSC review and comment. The EPA team will address the comments and prepare the final report. The final report will be uploaded to the EPA TeamLink website, and a final compact disk (CD) deliverable will be sent to the EPA and EPA OSC.